

CLAIMS

What is claimed is:

1. A method of supporting a handover decision in a wireless communication system comprising:

obtaining an estimate of position, velocity or direction of motion of a subscriber station; and

using the estimate, or information derived there-from, to support the handover decision.

2. The method of claim 1 wherein the obtaining step comprises:

retrieving a stored estimate and returning the retrieved estimate if sufficiently current to be accurate; and

deriving an updated estimate and returning the same if the retrieved estimate is insufficiently current to be accurate.

3. The method of claim 1 wherein the obtaining step is performed in response to a triggering event.

4. The method of claim 1 wherein the triggering event comprises a determination that the handover rate of the subscriber station exceeds a threshold while the subscriber station is within the coverage area of an umbrella cell.

5. The method of claim 4 wherein the obtaining step comprises obtaining an estimate of the velocity of the subscriber station.

6. The method of claim 5 wherein the using step comprises deciding to handover the subscriber station to the umbrella cell if the estimate of the velocity of the subscriber station exceeds a threshold.

7. The method of claim 6 further comprising blocking a handover back to a micro-cell at least for a time.

8. The method of claim 3 wherein the triggering event is a timeout condition occurring while the subscriber station is within the coverage area of an umbrella cell.

9. The method of claim 8 wherein the timeout condition indicates the subscriber station has not experienced a handover within a prescribed period of time.

10. The method of claim 9 wherein the obtaining step comprises obtaining an estimate of the velocity of the subscriber station.

11. The method of claim 10 wherein the using step comprises enabling a handover of the subscriber station to a micro-cell if the estimate of the velocity of the subscriber station is less than or equal to a threshold.

12. The method of claim 3 wherein the triggering event is a directed retry condition.

13. The method of claim 12 wherein the directed retry condition is prompted by a blocked call experienced by the subscriber station.

14. The method of claim 12 wherein the obtaining step comprises obtaining one or more estimates relating to the subscriber station.

15. The method of claim 14 further comprising deciding to perform a handover if the one or more estimates indicate (1) the subscriber station is located closer to a target cell than a serving cell; or (2) the subscriber station is moving towards the target cell and away from the serving cell.

16. A system comprising one or more entities configured to perform any of the methods of claims 1 to 15.

17. The system of claim 16 wherein the one or more entities include a position determination entity.

18. A system for supporting a handover decision in a wireless communication system, the system for supporting comprising one or more entities configured to obtain an estimate of position, velocity or direction of motion of a subscriber station; and use the estimate, or information derived there-from, to support the handover decision.

19. The system of claim 18 wherein the one or more entities are configured to obtain an estimate of position, velocity or direction of motion of a subscriber station by retrieving a stored estimate and returning the same if sufficiently current to be accurate; and deriving an updated estimate and returning the same if the retrieved estimate is insufficiently current to be accurate.

20. The system of claim 18 wherein the one or more entities are configured to obtain an estimate of position, velocity, or direction of motion of a subscriber station in response to a triggering event.

21. The system of claim 20 wherein the triggering event comprises a determination that the handover rate of the subscriber station exceeds a threshold while the subscriber station is within the coverage area of an umbrella cell.

22. The system of claim 21 wherein the one or more entities are configured to obtain an estimate of the velocity of the subscriber station in response to the triggering event, and decide to handover the subscriber station to the umbrella cell if the estimate of the velocity of the subscriber station exceeds a threshold.

23. The system of claim 22 wherein the one or more entities are configured to block a handover back to a micro-cell at least for a time.

24. The system of claim 20 wherein the triggering event comprises a timeout condition indicating the subscriber station has not experienced a handover within a prescribed period of time while the subscriber station is within the coverage area of an umbrella cell.

25. The system of claim 24 wherein the one or more entities are configured to obtain an estimate of the velocity of the subscriber station in response to the triggering event, and enable a handover the subscriber station to a micro-cell if the estimate of the velocity of the subscriber station is less than or equal to a threshold.

26. The system of claim 20 wherein the triggering event is a directed retry condition.

27. The system of claim 20 wherein the one or more entities obtain one or more estimates relating the subscriber station responsive to the triggering event.

28. The system of claim 27 wherein the one or more entities decide to perform a handover if the one or more estimates indicate that (1) the subscriber station is located closer to a target cell than a serving cell; or (2) the subscriber station is moving towards the target cell and away from the serving cell.

29. The system of claim 18 wherein the one or more entities comprise a base station controller and a serving mobile location center.

30. The system of claim 18 wherein the one or more entities comprise a mobile switching center and a serving mobile location center.

31. A system for supporting a handover decision in a wireless communication system comprising:

means for obtaining an estimate of position, velocity or direction of motion of a subscriber station; and

means for using the estimate, or information derived there-from, to support the handover decision.